



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent XWB-75
 UNIQUE ID NUMBER: 14RR072
 COMBUSTOR: Phase5 Tiled
 ENGINE TYPE: TF

BYPASS RATIO: 9.3
 PRESSURE RATIO (π_{00}): 36.8
 RATED THRUST (F_{00}) (kN): 334.0

REGULATORY DATA **** DATA SUPERSEDED **** SEE FOLLOWING UID FOR REVISED DATA: **18RR076**

| CHARACTERISTIC VALUE: | HC | CO | NO _x | SMOKE NUMBER |
|--|------|------|-----------------|--------------|
| D _p /F ₀₀ (g/kN) or SN | 2.1 | 36.4 | 48.7 | 11.6 |
| AS % OF ORIGINAL LIMIT | 10.9 | 30.9 | 42.9 | 68.4 |
| AS % OF CAEP/2 LIMIT (NO _x) | | | 53.6 | |
| AS % OF CAEP/4 LIMIT (NO _x) | | | 60.5 | |
| AS % OF CAEP/6 LIMIT (NO _x) | | | 67.2 | |
| AS % OF CAEP/8 LIMIT (NO _x) | | | 76.5 | |

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 - OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

| MODE | POWER SETTING (%F ₀₀) | TIME (minutes) | FUEL FLOW (kg/s) | EMISSIONS INDICES (g/kg) | | | SMOKE NUMBER |
|--|-----------------------------------|----------------|------------------|--------------------------|-------------|-----------------|--------------|
| | | | | HC | CO | NO _x | |
| TAKE-OFF | 100 | 0.7 | 2.411 | 0.00 | 0.37 | 36.59 | 6.2 |
| CLIMB OUT | 85 | 2.2 | 1.980 | 0.00 | 0.45 | 28.50 | 7.5 |
| APPROACH | 30 | 4.0 | 0.715 | 0.00 | 1.54 | 10.51 | 5.6 |
| IDLE | 7 | 26.0 | 0.270 | 1.30 | 24.36 | 4.38 | 1.3 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 955 | 549 | 10674 | 14800 | - |
| NUMBER OF ENGINES | | | | 2 | 2 | 2 | 2 |
| NUMBER OF TESTS | | | | 4 | 4 | 4 | 4 |
| AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX) | | | | 1.6 | 32.0 | 44.3 | 9.9 |
| SIGMA (D _p /F ₀₀ in g/kN, or SN) | | | | 0.1 | 2.4 | 1.0 | 3.0 |
| RANGE (D _p /F ₀₀ in g/kN, or SN) | | | | 1.59-1.7 | 30.28-33.64 | 43.62-45 | 7.8-12.1 |

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

| | |
|----------------------|-----------------|
| BAROMETER (kPa) | 98.5-101.3 |
| TEMPERATURE (K) | 280-295 |
| ABS HUMIDITY (kg/kg) | 0.00248-0.00964 |

FUEL

| | |
|----------|------|
| SPEC | |
| H/C | 1.86 |
| AROM (%) | 17.3 |

MANUFACTURER: Rolls-Royce plc
 TEST ORGANIZATION: Rolls-Royce
 TEST LOCATION: Derby
 TEST DATES: 01/04/2012-03/07/2014

NO_x REGULATION PARAGRAPH

| | |
|---|-------------------|
| | 2.3.2 c) (CAEP/4) |
| | 2.3.2 d) (CAEP/6) |
| x | 2.3.2 e) (CAEP/8) |

REMARKS

- Data from Certification Report DNS197360 Iss 2
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: -

('x' if complies, 'PR' if pre-regulation, '-' if information is not available)